REMARKS/ARGUMENTS

This paper is submitted in response to the Office Action mailed December 8, 2006. A Request for a One-Month Extension of Time under 37 CFR 1.136(a) is submitted herewith, along with the fee prescribed by 37 CFR 1.17(a)(1). The response is therefore timely.

Claims 1-20 were examined, and all stand rejected. In response to the Office Action, claim 5 has been amended. No new claims have been added. Support for the amendment is present throughout the specification. No new matter has been introduced. For the reasons set forth below, it is respectfully submitted that claims 1-20, as amended, should be allowed.

Rejection under 35 U.S.C. § 102(b)

The Examiner rejected Claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Chen (US 6,169,389). This rejection is respectfully traversed.

Applicant respectfully submits that the backup power supply of claim 1 includes a circuit for charging the capacitor from at least one of the external power source and the local loop and a circuit for coupling the charge of the capacitor to the control electronics of the telephone when the external power source is not functioning.

In rejecting claims 1 and 2, the Examiner states that Chen discloses a battery-less backup power supply for a telephone of a type that incorporates control electronics requiring an external source of power greater than that available from the loop of a Telco comprising: a capacitor (6) having a first lead coupled to ground; a circuit for charging the capacitor from at least one of the external power source and the local loop (Vs,2,T,R,3); and a circuit for coupling the charge of the capacitor to the control electronics of the telephone when the external power source is not functioning (4).

Applicant respectfully submits that Chen does not disclose an external power source as claimed in Claim 1. Chen only discloses a power source in the local loop (Vs). Specifically, Chen does not disclose a circuit for charging the capacitor from at least one of **the external power source** (emphasis added by Applicant) and the local loop as claimed in Claim 1. Further, Chen does not disclose a circuit for coupling the charge of the capacitor to the control electronics of the telephone when **the external power source is not functioning** as claimed in Claim 1 (emphasis added by Applicant).

Claim 2 depends from Claim 1. At least for the reasons mentioned above for Claim 1, Claim 2 is neither taught by nor obvious to one skilled in the art, based upon the teachings of Chen.

Rejections under 35 U.S.C. § 103(a)

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen (US 6,169,389) in view of Shiner et al. 2003/0076642. This rejection is respectfully traversed.

Claim 3 depends from Claim 1. At least for the reasons mentioned above for Claim 1, Chen does not teach Claim 1. Claim 3 in part further requires that the capacitor is charged to the lesser of the breakdown voltage of the first diode and the voltage of the **external power source** (emphasis added by the Applicant) when the external power source is functioning. In addition, examiner relies on Shiner's teaching of an over voltage circuit protection circuit to further reject additional claim limitations of Claim 3. Applicant respectfully submits that Shiner teaches an over voltage protection circuit for a battery-operated device while charging, whereas applicant's invention is specifically directed toward a battery-less backup power supply for a telephone. Thus, it is respectfully submitted that the Shiner et al. publication is not analogous art and is therefore improperly cited as a reference against Claim 3. In any event, Applicant respectfully submits that it would not have been obvious to combine the Chen and Shiner et al. references as suggested by the Examiner.

Claims 4-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen (US 6,169,389) in view of Shiner et al. 2003/0076642, and in further view of Kelly et al. 5,133,005. This rejection is respectfully traversed.

Claim 4 depends from Claim 3, which depends from Claim 1. At least for the reasons mentioned above for Claim 1 and Claim 3, Chen does not teach Claim 1. At least for the reasons mentioned above for Claim 3, Shiner is appropriately cited as a prior art reference. In further rejecting claim 4, examiner relies on Kelly et al. to disclose the bridge rectifier (D4, figure 2C) connected in the claimed arrangement.

Claim 4 in part requires a bridge rectifier having opposite first and second terminals coupled to the tip and ring signals of the local loop, a third terminal coupled to ground, and a fourth terminal having an output voltage connected through a resistor to the second lead of the first di-

ode and the second lead of the capacitor, whereby the capacitor is charged to the lesser of the output voltage of the resistor and the breakdown voltage of the first diode when the external power source is not functioning **and the telephone is on-hook** (emphasis added by the Applicant).

Applicant respectfully submits that Kelly et al. discloses a bridge rectifier connected to a shunt regulator (D6) in parallel with a resistor bridge (R89, R90) to charge a battery (B1) during the **off-hook** condition (see Column 5, lines 34-43). The bridge rectifier of Kelly cannot be substituted for the bridge rectifier as claimed in Claim 4. Chen in view of Shiner and further in view of Kelly does not suggest or teach Claim 4 as claimed by the Applicant. Applicant respectfully submits that Examiner is reconstructing Applicant's invention through impermissible hindsight by improperly assembling parts from multiple references to create Applicant's claimed invention. Therefore, Applicant respectfully requests allowance of Claims 4.

In rejecting Claims 5-11, the Examiner states that "KELLY et al. discloses line powered pay telephone with power management including the microprocessor (U1) is programmable and will wake up responsive to a wakeup signal and will proceed according to its program (Figure 1, col. 3, lines 50-65+).

Claim 5 depends from Claim 4, which depends from Claim 3, which depends from Claim 1. At least for the reasons mentioned above for Claim 1 and Claim 3, Chen does not teach Claim 1. At least for the reasons mentioned above for Claim 3, Shiner is not appropriately cited as a prior art reference. At least for the reasons mentioned above with respect to Claim 4, the art of record does not suggest or teach Claim 4 as claimed by the Applicant.

Claim 5 has been further amended to clarify that the electrically actuated hook switch having a second terminal is coupled to a second lead of the first diode, a second lead of the second diode and the second lead of the capacitor, whereby the capacitor is charged to the lesser of the voltage of the fourth terminal of the rectifier bridge and the breakdown voltage of the second diode when the external power source is not functioning and the telephone is off-hook.

In rejecting Claim 5, the Examiner relies on the teachings of Kelly (Figure 1, col. 3, lines 50-65+). In reviewing the reference, Applicant is unable to find any teachings related a second diode, as claimed in claim 5. If this rejection is maintained, Applicant respectfully requests that the Examiner provide a basis for maintaining this rejection.

Claim 6 depends from Claim 5, which depends from Claim 4, which depends from Claim 3, which depends from Claim 1. At least for the reasons mentioned above for Claim 1 and Claim 3, Chen does not teach Claim 1. At least for the reasons mentioned above for Claim 3, Shiner is not appropriately cited as a prior art reference. At least for the reasons mentioned above with respect to Claim 4, Chen in view of Shiner and further in view of Kelly does not suggest or teach Claim 4 as claimed by the Applicant. At least for the reasons mentioned above with respect to Claim 5, the art of record does not suggest or teach Claim 5, as amended.

Claim 6 recites, in part:

> an electrically actuated hold switch with a third terminal coupled to ground and a Hold signal output terminal of the microprocessor and operable to couple the voltage of the second lead of the capacitor to the power supply bus of the microprocessor in response to a receipt thereby of the Hold signal;
>
> a manually operated switchhook operable to couple the voltage of the second lead of the capacitor to a Hook signal input terminal of the microprocessor and the third terminal of the hold switch when actuated;
>
> whereby the telephone can be manually instructed to go off-hook for placing or receiving a call when the external power source is not functioning.

In rejecting Claim 6, the Examiner relies on the teachings of Kelly (Figure 1, col. 3, lines 50-65+.) In reviewing the reference, Applicant is unable to find any teachings related to an electrically actuated hold switch and a manually operated switchhook as claimed in Claim 6 whereby the telephone can be manually instructed to go off-hook for placing or receiving a call when the external power source is not functioning. If this rejection is maintained, Applicant respectfully requests that the Examiner provide a basis for maintaining this rejection.

Claim 7 depends from Claim 6, which depends from Claim 5, which depends from Claim 4, which depends from Claim 3, which depends from Claim 1. At least for the reasons mentioned above for Claim 1 and Claim 3, Chen does not teach Claim 1. At least for the reasons mentioned above for Claim 3, Shiner is not appropriately cited as a prior art reference. At least for the rea-

sons mentioned above with respect to Claim 4, the art of record does not suggest or teach Claims 4-6.

Claim 7, in part, further recites

> a ring detector coupled to the fourth terminal of the bridge rectifier and operable upon detection of a ring signal thereon to apply a Ring Detect signal to a Ring Detect signal input terminal of the microprocessor and to couple the voltage of the fourth terminal of the bridge rectifier to the third terminal of the Hold switch,
>
> whereby the telephone can be programmed to automatically go off-hook for receiving a call without local human participation and when the external power source is not functioning.

In rejecting Claim 7, the Examiner relies on the teachings of Kelly (Figure 1, col. 3, lines 50-65+.) In reviewing the reference, Applicant is unable to find any teachings related to a ring detector as claimed in claim 7 whereby the telephone can be programmed to automatically go off-hook for receiving a call without human intervention and when the external power source is not functioning. If this rejection is maintained, Applicant respectfully requests that the Examiner provide a basis for maintaining this rejection.

Claims 8 and 9 depend from Claim 7. At least for the reasons mentioned above for Claim 7, the art of record does not suggest or teach Claims 8-9.

Claim 10 depends from Claim 5. At least for the reasons mentioned above for Claim 5, the art of record does not suggest or teach Claim 10.

Claim 11 depends from Claim 6. At least for the reasons mentioned above for Claim 6, the art of record does not suggest or teach Claim 11.

In rejecting Claims 12-17, examiner states that Chen in view of Shiner and further in view of Kelley et al. discloses a batter-less backup power supply for a telephone of a type that incorporates control electronics requiring an external source of power greater than that available from the service loop of a Telco when the telephone is on-hook. This rejection is respectfully traversed.

Claim 12 in part recites a capacitor, a first diode, an electrical connection between the external power source and the first diode and the capacitor, a bridge rectifier connected to the first diode and the capacitor, a microprocessor, a second diode,

an electrically actuated hook switch coupled to the bridge rectifier, first diode, capacitor and operable to couple the voltage of the fourth terminal of the bridge rectifier to the second terminal of the hook switch in response to a receipt of the Hold signal from the microprocessor,

an electrically actuated hold switch operable to couple the voltage of the capacitor to the power supply bus of the microprocessor in response to a receipt of the Hold signal,

a manually actuated switchhook operable to couple the voltage of the capacitor to a Hook signal input terminal of the microprocessor and the third terminal of the hold switch when activated; and

a ring detector coupled to the bridge rectifier and operable upon detection of a ring signal thereon to apply a Ring Detect signal to a Ring Detect signal input terminal of the microprocessor and to couple the voltage of the fourth terminal of the bridge rectifier to the third terminal of the Hold switch.

The Examiner has reproduced parts of the preamble as being taught by Chen in view of Shiner et al. and further in view of Kelly et al. without specifically identifying where in Chen, Shiner and Kelly the various elements or their novel relationships as claimed in Claim 12 are taught. If this rejection is maintained, Applicant respectfully requests that the Examiner provide a basis for maintaining this rejection.

Claims 13 – 17 depend from Claim 12. At least for the reasons mentioned above for Claim 12, Claims 13 – 17 are also patentably distinguished over the art of record.

In rejecting Claims 18-20, the Examiner states that Chen in view of Shiner et al. and further in view of Kelley et al. discloses a method for providing backup power to a telephone of a type that incorporates control electronics requiring an external source of power greater than that available from the service loop of a Telco when the telephone is on-hook without using batteries. This rejection is respectfully traversed.

Claim 18 in part includes the steps of providing a battery-less backup power supply in accordance with claim 1 in the telephone, charging the capacitor of the backup power supply from at least one of the external power source and the local loop; and coupling the charge of the

capacitor to the control electronics of the telephone when the external power source is not functioning such that the telephone is capable of at least placing and receiving calls.

The Examiner has reproduced parts of the preamble as being taught by Chen in view of Shiner et al. and further in view of Kelly et al. without specifically identifying where in the references the steps as claimed in Claim 18 are taught. If this rejection is maintained, Applicant respectfully requests that the Examiner provide a basis for maintaining this rejection.

Claims 19 – 20 depend from Claim 18. At least for the reasons mentioned above for Claim 18, Claims 13 – 17 are also patentably distinguished over the art of record.

CONCLUSION

For the foregoing reasons, Applicant believes Claims 1-20 are allowable, and a notice of allowance is respectfully requested. If the Examiner has any questions regarding the application, the Examiner is invited to call the undersigned Attorney at (949) 955-1920.

Respectfully submitted,

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HOWARD J. KLEIN
Registration No. 28,727

Klein, O'Neill & Singh, LLP (Customer No.: 22145)
43 Corporate Park, Suite 204
Irvine, California 92606
Tel: (949) 955-1920
Fax: (949) 955 1921
E-mail: hjklein@koslaw.com